

METHODS AND COMPOSITIONS FOR ON-LINE GAS TURBINE CLEANING

ABSTRACT OF THE DISCLOSURE

Methods and compositions for on-line cleaning of internal surfaces of selected sections of a hydrocarbon fuel burning gas turbine and associated heat recovery equipment, during operation. Cleaning solutions containing graphite and/or molybdenum-based particles and oil soluble corrosion inhibitors, aromatic solvents, and surfactants are selectively introduced directly into the combustion chamber (combustor) of the gas turbine, into the fuel stream, water washing system, or the combustion air system (hot gas path). The cleaning process dislodges unwanted ash deposit buildup and, thereby restores the gas turbine to rated power. When introduced into the compressor section, the particles impinge on the metal surfaces, cleaning them prior to entering the hot gas section where the process may be repeated. They may also be carried through the exhaust to additionally clean attendant heat recovery equipment, if present.